



CASE STUDY

SLOPE MAT FOR

NH-169 HIGHWAY SLOPE STABILIZATION, KARNATAKA



PROJECT:

Sannur to Bikarnakatte Section, NH-169 Four-Laning

CLIENT / CONTRACTOR:

Dilip Buildcon Limited (DBL)

LOCATION:

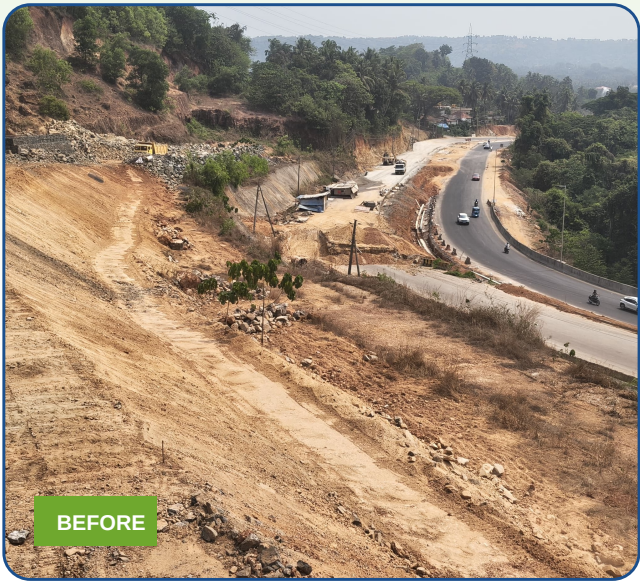
Moodabidri - Mangaluru, Karnataka

PERIOD:

WO dated 25.07.2026 - 2.5-month execution

INTRODUCTION

GTI is a geosynthetics, geotechnical engineering, and ground improvement specialist serving roads, railways, hydraulics, mining, and geo-environmental projects across India. With over a decade of experience and a client list spanning government authorities and infrastructure majors, GTI brings certified, standards-compliant erosion control and slope stabilization systems to highway corridors nationwide.



OVERVIEW

The Sannur to Bikarnakatte section forms part of NH-169 (Karkala-Mangalore), being widened to four lanes under the Bharatmala Pariyojana programme on a Hybrid Annuity Mode contract. Executed by Dilip Buildcon Limited, the corridor runs through the Moodabidri-Mangaluru stretch of coastal Karnataka, where high rainfall makes rapid, vegetative cover on cut and fill slopes essential before monsoon.

SCOPE OF WORK

Per Work Order 4800183253 dated 25.07.2026, GTI's scope covers supply and installation of slope matting with hydroseeding, plus a standalone hydroseeding package, across the project's cut and fill slopes - including soil dressing, watering, and up to two months of maintenance through to grass establishment.

45,000 m²

Geo Green with Hydroseeding - Slope mat (300 GSM) supply & installation per MORTH 700, plus hydroseeding



25,000 m²

Standalone Hydroseeding - soil dressing, seeding, and up to 2 months' maintenance



2.5 Months

Supply & apply period from Work Order date, per agreed schedule





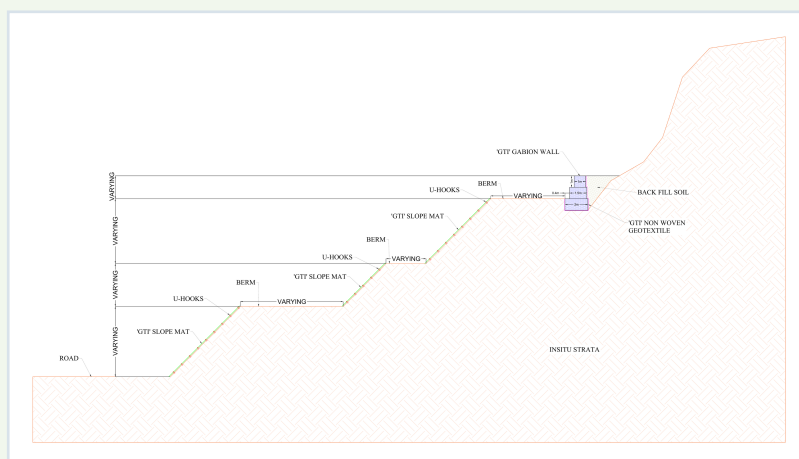
SCOPE & SITE CONSTRAINTS

Highway widening leaves extensive cut-and-fill slopes exposed to coastal Karnataka's monsoon rainfall, creating an urgent need for erosion protection and rapid vegetative stabilization before surface runoff takes hold. Under DBL's scope, slopes were graded and prepared before and after clay liner placement, with water supply arranged on site; GTI's scope covered supply of slope matting, hydroseeding, and anchoring pins, delivered on a supplier's-account, FOR-site-delivery basis within a 2.5-month window.

INSTALLATION SEQUENCE



TYPICAL CROSS-SECTION



GTI Gabion Wall & Slope Mat system — typical berm-terraced slope section with non-woven geotextile and U-hook anchorage (dimensions vary by site condition)

SOLUTION PROVIDED BY GTI

GTI supplied and installed a 300 GSM slope mat - a biodegradable erosion-control blanket - across the graded slopes per MORTH Section 700, anchored with U-pins for stability on the gradient. A hydroseeding mix of seed, mulch, fertilizer, and tackifier was then sprayed uniformly over the treated surface using a hydro-seeder, followed by up to two months of watering and maintenance.

Payment was tied to verified milestones - 70% on hydroseeding application, 30% on confirmed grass germination.

70% — Hydroseeding Applied

30% — Grass Germination

MATERIALS & SYSTEM USED:



Slope mat, 300 GSM, per MORTH Section 700



Hydroseeding mix - seed, mulch, fertilizer & tackifier



U-Pins for slope anchorage (GTI supply)



Hydro-seeder & water tanker for application and curing

CONCLUSION



SITE
VERIFIED

Vegetative slope stabilization is a critical line of defence on highway cut-and-fill slopes, particularly across coastal Karnataka's high-rainfall terrain, where unprotected surfaces are vulnerable to erosion soon after grading. On the Sannur to Bikarnakatte section of NH-169, GTI's slope matting and hydroseeding treatment was applied across roughly 70,000 m² of slope for Dilip Buildcon Limited, within the stipulated 2.5-month supply-and-apply window.

Site photographs across the treated corridor confirm dense, established grass cover taking root on the slope-matted slopes, with the completed gabion wall providing structural stability alongside – durable, low-maintenance protection ahead of the monsoon.



70,000 m²

Total Treated Area



1.49 Cr

Order Value (incl. tax)



2.5 Months

Supply & Apply Period



Karnataka

Moodabidri–Mangaluru



CURRENT STATUS



| Head Office

38, 2nd Floor, Mohammadpur, Near Bhikaji Cama Place, New Delhi

| Branches

J&K, HP, UK, Assam, TN, Gujarat, Kerala, Odisha, Karnataka, Manipur

| Overseas Presence

Bhutan, Nepal, Bangladesh